TRANSPARENT CONTENT ADDRESSABLE DATA STORAGE AND COMPRESSION FOR A FILE SYSTEM

ABSTRACT

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Transparent content addressable data storage and compression for a file system including providing a data structure that associates file identifiers and retrieval keys for memory blocks for storing file contents; storing in the data structure one or more file identifiers; providing a chunk of data comprising a quantity of input data of a file;

10   retrieving a memory block from computer memory; searching for a segment of the chunk that matches the memory block; and if a matching segment is found: discarding the matching segment; providing a retrieval key for the memory block as a retrieval key for the matching segment; identifying an unmatched portion of the chunk that does not match the memory block; storing the unmatched portion; and

15   providing a retrieval key for the unmatched portion.